IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1. (Currently amended) A method for identifying a type of semiconductor device being fabricated on a substrate by evaluating a mark comprising at least one recess in ~~a~~ the substrate surface through at least one layer formed over the mark, comprising:

scanning electromagnetic radiation of at least one wavelength across at least a portion of the substrate including the at least one recess, ~~said~~the at least one wavelength capable of at least partially penetrating a material substantially opaque to at least some wavelengths of electromagnetic radiation;

measuring an intensity of radiation of ~~said~~the at least one wavelength reflected by different locations of ~~said~~the at least a portion of the substrate;

detecting locations at which ~~said~~the intensity changes from substantially a baseline intensity; and

correlating each location at which ~~said~~the intensity changes to at least one characteristic which distinguishes ~~identify~~ the mark from other marks on or in the substrate and to identify the type of semiconductor device being fabricated on the substrate.

2. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises raster scanning ~~said~~the electromagnetic radiation.

3. (Currently amended) The method of claim 1, wherein ~~said~~ scanning is effected over at least a portion of a wafer comprising semiconductor material where the mark is located.

4. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises scanning electromagnetic radiation comprising a plurality of wavelengths across at least ~~said~~the portion of the substrate.

5. (Currently amended) The method of claim 4, wherein ~~said~~ measuring comprises measuring intensities of reflected radiation of each of ~~said~~the plurality of wavelengths.

6. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of wavelengths of about 100 nm to about 1,000 nm across ~~said~~the at least a portion of the substrate.

7. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of wavelengths of about 190 nm to about 800 nm across ~~said~~the at least a portion of the substrate.

8. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of a wavelength of at least about 140 nm across ~~said~~the at least a portion of the substrate.

9. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of wavelengths of about 220 nm to about 800 nm across ~~said~~the at least a portion of the substrate.

10. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of wavelengths of about 300 nm to about 780 nm across ~~said~~the at least a portion of the substrate.

11. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of a wavelengths of about 550 nm across at ~~said~~the least a portion of the substrate.

12. (Currently amended) The method of claim 1, wherein ~~said~~ scanning is effected from above the substrate.

13. (Currently amended) The method of claim 1, wherein ~~said~~ scanning is effected at a non-perpendicular angle relative to the substrate.

14. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises moving a source of ~~said~~the electromagnetic radiation relative to the substrate.

15. (Currently amended) The method of claim 1, wherein ~~said~~ scanning comprises moving the substrate relative to a source of ~~said~~the electromagnetic radiation.

16. (Currently amended) The method of claim 1, wherein ~~said~~ measuring ~~said~~the intensity is effected using a reflectometer.

17. (Currently amended) The method of claim 1, wherein ~~said~~ detecting comprises identifying a location of the substrate from which ~~said~~the electromagnetic radiation was reflected.

18. (Currently amended) The method of claim 1, wherein ~~said~~ detecting comprises identifying a location of the substrate to which ~~said~~the electromagnetic radiation was directed.

19. (Currently amended) The method of claim 1, wherein ~~said~~ correlating comprises mapping at least each location at which ~~said~~the intensity of electromagnetic radiation reflected from ~~said~~the substrate varied from ~~said~~the baseline intensity.

20. (Currently amended) The method of claim 19, wherein ~~said~~ correlating further comprises recognizing the mark based at least in part on ~~said~~ mapping.

21. (Currently amended) A method for determining a destination for a semiconductor device substrate, comprising:

identifying a mark comprising at least one recess within a surface of the semiconductor device substrate and covered with at least one layer of material by:

scanning electromagnetic radiation of at least one wavelength across at least a portion of the semiconductor device substrate including the at least one recess, ~~said~~the at least one wavelength capable of at least partially penetrating a material substantially opaque to at least some wavelengths of electromagnetic radiation;

measuring an intensity of radiation of ~~said~~the at least one wavelength reflected by different locations of ~~said~~the at least a portion of the semiconductor device substrate;

detecting locations at which ~~said~~the intensity changes from substantially a baseline intensity; and

correlating each location at which ~~said~~the intensity changes to identify the mark; and

identifying a predetermined destination for the semiconductor device substrate based on the mark.

22. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises raster scanning ~~said~~the electromagnetic radiation.

23. (Currently amended) The method of claim 21, wherein ~~said~~ scanning is effected over at least a portion of the semiconductor device substrate comprising semiconductor material where the mark is located.

24. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises scanning electromagnetic radiation comprising a plurality of wavelengths across at least ~~said~~the portion of the semiconductor device substrate.

25. (Currently amended) The method of claim 24, wherein ~~said~~ measuring comprises measuring intensities of reflected radiation of each of ~~said~~the plurality of wavelengths.

26. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of wavelengths of about 100 nm to about 1,000 nm across ~~said~~the at least a portion of the semiconductor device substrate.

27. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of wavelengths of about 190 nm to about 800 nm across ~~said~~the at least a portion of the semiconductor device substrate.

28. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of a wavelength of at least about 140 nm across ~~said~~the at least a portion of the semiconductor device substrate.

29. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of wavelengths of about 220 nm to about 800 nm across ~~said~~the at least a portion of the semiconductor device substrate.

30. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of wavelengths of about 300 nm to about 780 nm across ~~said~~the at least a portion of the semiconductor device substrate.

31. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises scanning electromagnetic radiation of a wavelength of about 550 nm across ~~said~~the at least a portion of the semiconductor device substrate.

32. (Currently amended) The method of claim 21, wherein ~~said~~ scanning is effected from above the semiconductor device substrate.

33. (Currently amended) The method of claim 21, wherein ~~said~~ scanning is effected at a non-perpendicular angle relative to the semiconductor device substrate.

34. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises moving a source of ~~said~~the electromagnetic radiation relative to the semiconductor device substrate.

35. (Currently amended) The method of claim 21, wherein ~~said~~ scanning comprises moving the semiconductor device substrate relative to a source of ~~said~~the electromagnetic radiation.

36. (Currently amended) The method of claim 21, wherein ~~said~~ measuring ~~said~~the intensity is effected using a reflectometer.

37. (Currently amended) The method of claim 21, wherein ~~said~~ detecting comprises identifying a location of the semiconductor device substrate from which ~~said~~the electromagnetic radiation was reflected.

38. (Currently amended) The method of claim 21, wherein ~~said~~ detecting comprises identifying a location of the semiconductor device substrate to which ~~said~~the electromagnetic radiation was directed.

39. (Currently amended) The method of claim 21, wherein ~~said~~ correlating comprises mapping at least each location at which ~~said~~the intensity of electromagnetic radiation reflected from ~~said~~the semiconductor device substrate varied from ~~said~~the baseline intensity.

40. (Currently amended) The method of claim 39, wherein ~~said~~ correlating further comprises recognizing the mark based at least in part on ~~said~~ mapping.

41. (Currently amended) A system for identifying a marking on a substrate indicative of a type of semiconductor device being fabricated on the substrate and at least partially covered by at least one layer of material, comprising:

at least one radiation source configured and positioned to direct electromagnetic radiation of at least one wavelength toward a substrate, ~~said~~the at least one wavelength capable of at least partially penetrating a material substantially opaque to at least some wavelengths of electromagnetic radiation;

at least one reflectometer positioned so as to receive electromagnetic radiation of ~~said~~the at least one wavelength reflected from a location of ~~said~~the substrate covered with a material substantially opaque to at least some wavelengths of electromagnetic radiation; and

at least one processor associated with ~~said~~the reflectometer for analyzing a pattern of intensities of electromagnetic radiation of ~~said~~the at least one wavelength reflected from a plurality of locations of ~~said~~the substrate and for correlating ~~said~~the pattern of intensities to a known identifier associated with the marking and to the type of semiconductor device being fabricated on the substrate.

42. (Currently amended) The system of claim 41, wherein ~~said~~the at least one processor includes at least one logic circuit for comparing ~~said~~the intensity of ~~said~~the at least one wavelength of radiation reflected from ~~said~~the location of ~~said~~the substrate to a baseline intensity, ~~said~~the logic circuit being under control of at least a portion of at least one program.

43. (Currently amended) The system of claim 42, wherein ~~said~~the at least one logic circuit for comparing ~~said~~the intensity also effects storing in memory at least one location of ~~said~~the substrate where ~~said~~the intensity of ~~said~~the at least one wavelength of radiation reflected from ~~said~~the substrate varies from ~~said~~the baseline intensity.

44. (Currently amended) The system of claim 43, wherein ~~said~~the at least one processor includes at least one logic circuit for mapping at least locations of ~~said~~the substrate where an intensity of ~~said~~the at least one wavelength of reflected electromagnetic radiation varies

from ~~said~~the baseline intensity, ~~said~~the at least one logic circuit for mapping being under control of at least a portion of at least one program.

45. (Currently amended) The system of claim 44, wherein ~~said~~the at least one processor includes at least one logic circuit for identifying ~~said~~the surface feature based on a mapped plurality of locations where an intensity of ~~said~~the at least one wavelength of reflected electromagnetic radiation varies from ~~said~~the baseline intensity, ~~said~~the at least one logic circuit for identifying being under control of at least a portion of at least one program.

46. (Currently amended) The system of claim 41, further comprising an actuation apparatus for effecting movement of at least one of ~~said~~the substrate and ~~said~~the at least one radiation source.

47. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is configured to direct incident radiation of a plurality of wavelengths onto at least a portion of ~~said~~the substrate.

48. (Currently amended) The system of claim 47, wherein ~~said~~the at least one reflectometer is configured to measure intensities of reflected radiation of each of ~~said~~the plurality of wavelengths.

49. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is configured to emit incident radiation of wavelengths of about 100 nm to about 1,000 nm.

50. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is configured to emit incident radiation of wavelengths of about 190 nm to about 800 nm.

51. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is configured to emit incident radiation of a wavelength of at least about 140 nm.

52. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is configured to emit incident radiation of wavelengths of about 220 nm to about 800 nm.

53. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is configured to emit incident radiation of wavelengths of about 300 nm to about 780 nm.

54. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is configured to emit incident radiation of a wavelength of about 550 nm.

55. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is positioned to emit incident radiation toward an active surface of ~~said~~the substrate.

56. (Currently amended) The system of claim 41, wherein ~~said~~the at least one radiation source is positioned to emit incident radiation toward an active surface of ~~said~~the substrate at a non-perpendicular angle thereto.

57. (Currently amended) The system of claim 41, further comprising a user interface associated with ~~said~~the at least one processor.

58. (Currently amended) The system of claim 41, further comprising at least one output device associated with ~~said~~the at least one processor.

59. (Currently amended) A processor for characterizing at least one material-covered recessed marking formed in a substrate and a type of semiconductor device being fabricated on the substrate, comprising:

at least one logic circuit for comparing a measured intensity of at least one wavelength of reflected radiation to a baseline intensity of ~~said~~the at least one wavelength of radiation reflected from a planar portion of ~~said~~the substrate; and

at least one logic circuit for mapping a plurality of locations of ~~said~~the substrate where ~~said~~the measured intensity differs from ~~said~~the baseline intensity, ~~said~~the at least one logic circuit being under control of at least a portion of at least one program, a map resulting from ~~said~~the mapping comprising a digital image of the recessed marking; and

at least one logic circuit for identifying a type of semiconductor device that corresponds to the mapped locations.

60. (Currently amended) The processor of claim 59, further comprising at least one logic circuit

for characterizing the at least one material-covered recess based on ~~said~~the plurality of locations mapped by ~~said~~the at least one logic circuit, ~~said~~the at least one logic circuit for characterizing being under control of at least a portion of at least one program.